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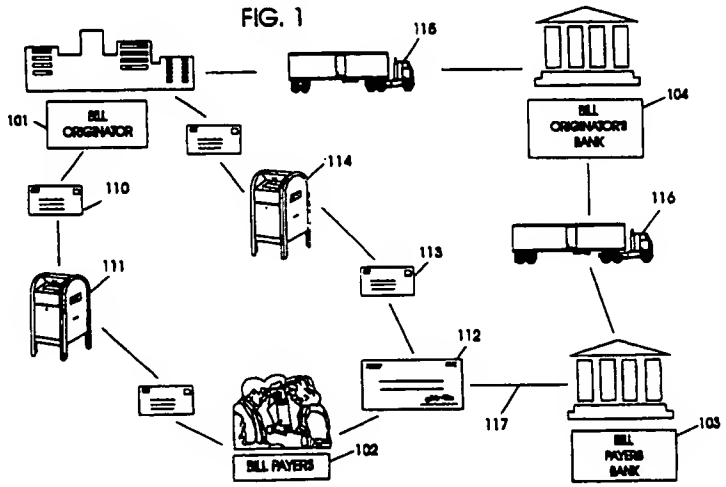
(54) Method and system for bill presentation and payment reconciliation

(57) A system and method for electronic bill presentation and payment reconciliation. A service sorts bills received from a plurality of service providers by customer and presents to a customer those bills addressed to that customer, then receives and processes payment instructions for payment of the bill and reconciliation with the presented bill.

FIG. 1



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then uses a carrier 116 to transport the check to the bill payer's bank 103, then the bill payer's bank 103 returns the check as illustrated by line 117 to the bill payer, completing the cycle. The carriers and the mail are obvious sources of potential cost, delay and possibility of loss.

In Figure 2, the bill originators 101, the bill payers or consumers 102, the bill payer's bank 103 and the bill originator's bank 104 remain unchanged from the implementation in Figure 1. The system of Figure 2 has the addition of an electronic bill presenter 200 being interposed into the system and allowing the electronic presentation and payment as we described. A bill originator 101 creates the information necessary to bill consumers then sends an electronic message 201 to the electronic bill presenter 200. The electronic bill presenter 200 sorts the bills from various bill originators (the more the better) and presents the bills for a selected customer to the bill payer 102 in the form of electronic bill presentment method 202. The bill payer 102 then indicates the bills that he wishes to be paid, the amounts of the payments by a return message or payment authorization 203 to the electronic bill presenter 200. That payment authorization 203 then is sorted by bank, and a message is presented on line 204 to each of the banks involved as associated with individual consumers or bill payer 102. The bill payer's bank 103 then sends a message to the bill originator's bank 104 as evidenced by the line 205 indicating a payment. The bill originator's bank sends a message or payment notification as indicated by 206 to the bill originator, with detail as to the amount and customers involved. Meanwhile, the electronic bill presenter 200 has sent a message 207 indicating the reconciled payments to the bill originator for comparison with the payment notification messages 206 received from the bill originator's bank 104.

Figure 3 is a flow chart of the process for paying bills. At block 301, the payer connects to the system and at block 302 the payer requests the bills. The system extracts the payer's bill data at block 303 from the bill database 304. At block 305, template data is extracted from template database 306. The bill data and the template data will be combined at block 307 to create the bill which is transmitted to the payer and displayed on his device.

Of course, there are many different devices that could be used to display the payments. A personal computer could be used, a Screen Phone, Interactive TV, telephone, Personal Digital Assistance (PDA) or an ATM. Some of these terminals like a personal computer have local storage while other terminals like a telephone have no local storage. Where the terminal includes local storage, at the first instance of a bill from a particular bill originator, the system can send the template information to the bill originator for local storage (e.g., on the personal computer) for future instances of that bill. Where the user terminal includes no local storage, the total bill must be transmitted and presented on each occurrence. Thus, the template plus the variable bill data will be made for such user terminal for each bill.

At block 309, the bill presentment will be recorded in the bill database 304. When the bill payer issues payment instructions at block 310, his payment will be recorded at block 311 with information to the bill originator and an update to the bill database 304. At block 312, the payment will be included with correlating information.

Figure 4 illustrates an example of the screen 401 a customer or bill payer (102 in Figures 1 and 2) will see in paying his bills. The screen 401 is divided into a region 402 showing new or unopened bills, a region 403 showing old or previously opened bills, and a region 404 showing action icons. The region 402 includes a mailbox 411 and bill representations 412, 413, 414,..., each including a "from" line indicating the name of the bill originator (e.g. Duke Power for bill 412). The region 403 of opened bills includes a file folder icon 421 and bill representations 422, 423, 423... The opened bills are those which had already been received and reviewed, but not yet acted upon (for example, a bill which was received but which is not yet due or as to which the customer has a reason for not paying). The region 404 with action icons is sometimes called a tool bar with buttons and includes an icon 431 to pay a bill, an icon 432 to move to the next bill, an icon 433 to identify bank account(s) used to pay bills, an icon 434 to enroll payees (bill originators) and an icon 435 to get a summary of outstanding bills. Icons 436, 437, 438, 439, 440 and 441 show, respectively, history log of paid bills, generate bill and payment reports, open mail box window, open bill file window, attach note to payment and send payment. Selection Option 442 from the screen's action bar allows selecting predetermined options such as automatic open (the automatically opening and showing the next bill when the previous bill is paid), autopay (automatically show the payment check when a bill is selected) and lightening pay (automatically paying all outstanding bills without showing either the bill or the check). Bills can be color or otherwise coded, if desired, as by indicating bills designated to be paid in green, bills opened but not yet designated to be paid by yellow and bills not yet opened (newly arrived) by red. As is customary with a graphical user interface, each icon has a symbol relating to the function as well as a descriptive word and may be invoked by moving the computer cursor to the icon, then using the computer mouse to click on it to select it.

Figure 5 illustrates the screen 501 that a customer or bill payer uses to pay a bill. At the left, a portion of the unpaid bill region 402 is shown, with the bill from Vision Cable selected and the bill shown in a right hand region 502. Once the customer selects to pay the bill, a check display 503 appears as a metaphor for a message to send a payment. If the customer agrees with the display shown (in this case to pay $24.44 to Vision Cable for Account 20421-144412-01-6 from his checking account at First National Bank), he clicks on an OK icon 504.

Figure 6 illustrates the summary of the outstanding bills and payments to be made in a region 601. If the

8. The method of Claim 7 further comprising the step of sending a message from the bill originator's bank to the bill originator confirming receipt of a payment from a bill payer's bank as payment of an electronically presented bill.

9. The method of Claim 6 further comprising the step of transmitting a payment order from the electronic bill presenter to a first bill payer's bank and from a the first bill payer's bank to a second bill payer's bank.

10. The method of Claim 6 wherein multiple bill originators are electronically connected to the electronic bill presenter for transmission of bills as electronic messages, and multiple bills from multiple bill originators are collectively presented by the electronic bill presenter to a bill payer.

11. The method of Claim 6 further comprising the step of reconciling payment instructions processed by the electronic bill presenter with notification of payments received by a bill originator's bank.

12. The method of Claim 6 further comprising the step of creating electronic bills by combining bill data received from a bill originator with a bill template adapted to contain and present data of bills to individual bill payers.

13. The method of Claim 12 further comprising the step of combining data of multiple bills for an individual bill payer with a single bill template.

14. The method of Claim 12 further comprising the step of generating graphical representations of bill data combined with a bill template for presentation to a bill payer.

15. The method of Claim 12 further comprising the step of generating a bill payment data entry format in a graphical form of a check for presentation to a bill payer for entry and transmission of bill payment data.

16. The method of Claim 12 further comprising the step of generating graphical control functions for display with said template and bill data whereby a bill payer controls electronic bill presentation, payment and records by selection of said graphical control functions.

17. The method of Claim 12 further comprising the step of generating graphical representations of records of bills presented or paid via the electronic bill presenter.

18. The method of Claim 12 wherein a bill originator performs the steps of creating a bill template adapted to contain and present electronic bills to bill payers, and transmits the bill template to the electronic bill payer for storage in a bill template database.

19. The method of Claim 6 further comprising the step of initiating transmission of electronic messages from the electronic bill presenter to a bill payer upon receipt of a request from a bill payer via a connection with the electronic bill presenter for electronic presentation of a bill.

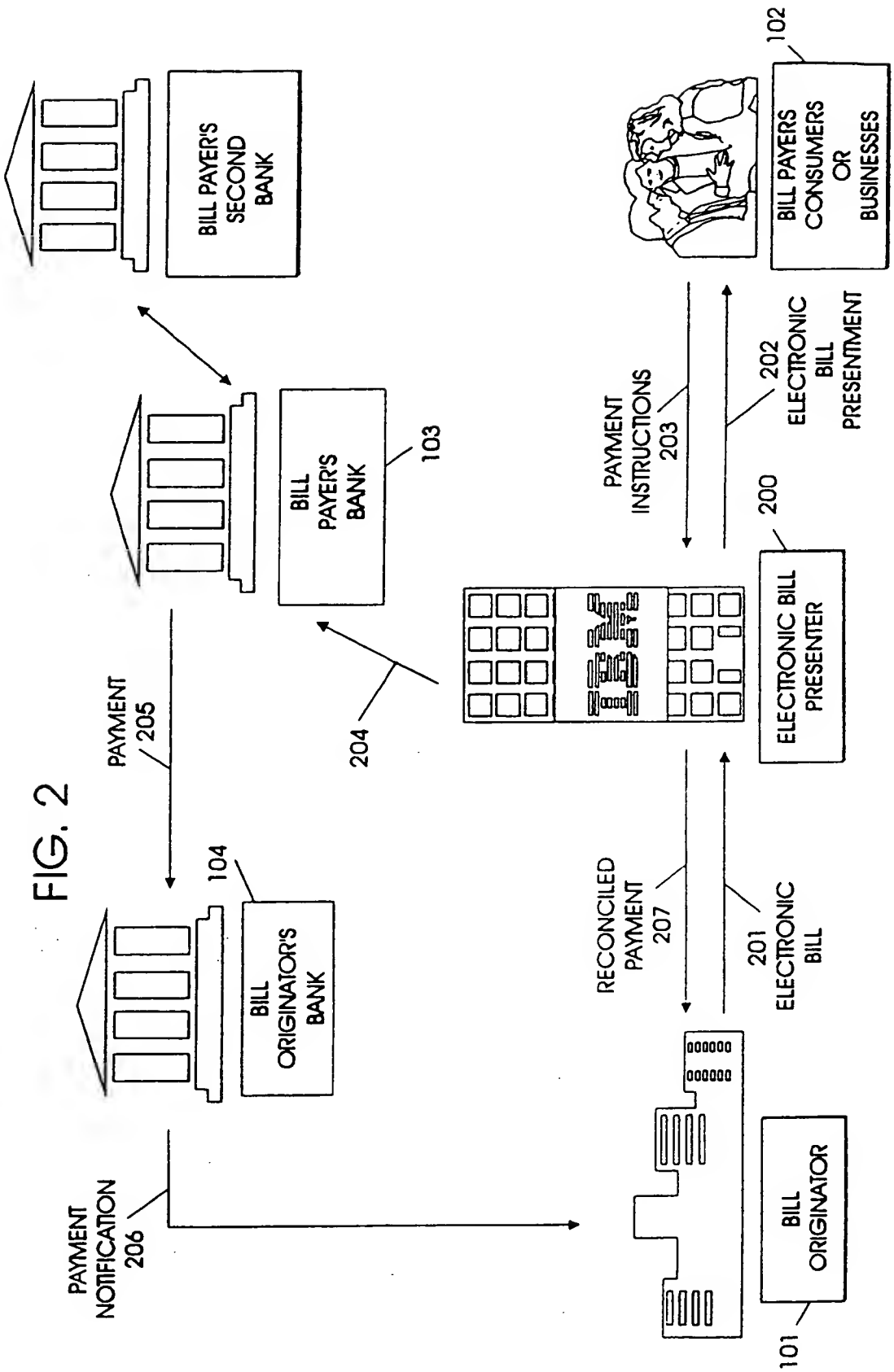
20. A system for electronic presentation, payment and reconciliation of bills, the system comprising:

an electronic bill presenter in electronic communication with at least one bill originator and a plurality of bill payers,
the electronic bill presenter operative to receive bill data from a bill originator in the form of an electronic message,
the electronic bill presenter further operative to create electronic bills for graphical presentation to bill payers by combining bill data with a graphical bill template,
the electronic bill presenter further operative to transmit to bill payers identified by said bill data graphical representations of electronic bills from bill originators,
the electronic bill presenter further operative to receive bill payment instructions from a bill payer to authorize a bill payer's bank to transfer a payment to a bill originator's bank in payment of an electronic bill,
the electronic bill presenter further operative to transmit a message to a bill originator notifying the bill originator of receipt of payment authorization from a bill payer to which a bill originator's bill was presented by the electronic bill presenter.

21. The system of Claim 20 wherein said electronic bill presenter further comprises a data base for receiving and storing bill data from bill originators.

22. The system of Claim 20 wherein said electronic bill presenter further comprises a template data base for receiving and storing bill templates combinable with bill data to create graphical presentations of bills.

23. The system of Claim 20 wherein the electronic bill presenter further comprises a program for generating graphical representations of bill templates and combining bill data retrieved from a bill data base with a bill template to create a graphical representation of an electronic bill, and transmitting a graphical representation of an electronic bill to a display device of a bill payer.


BILL PAYER'S SECOND BANK
BILL PAYER'S BANK
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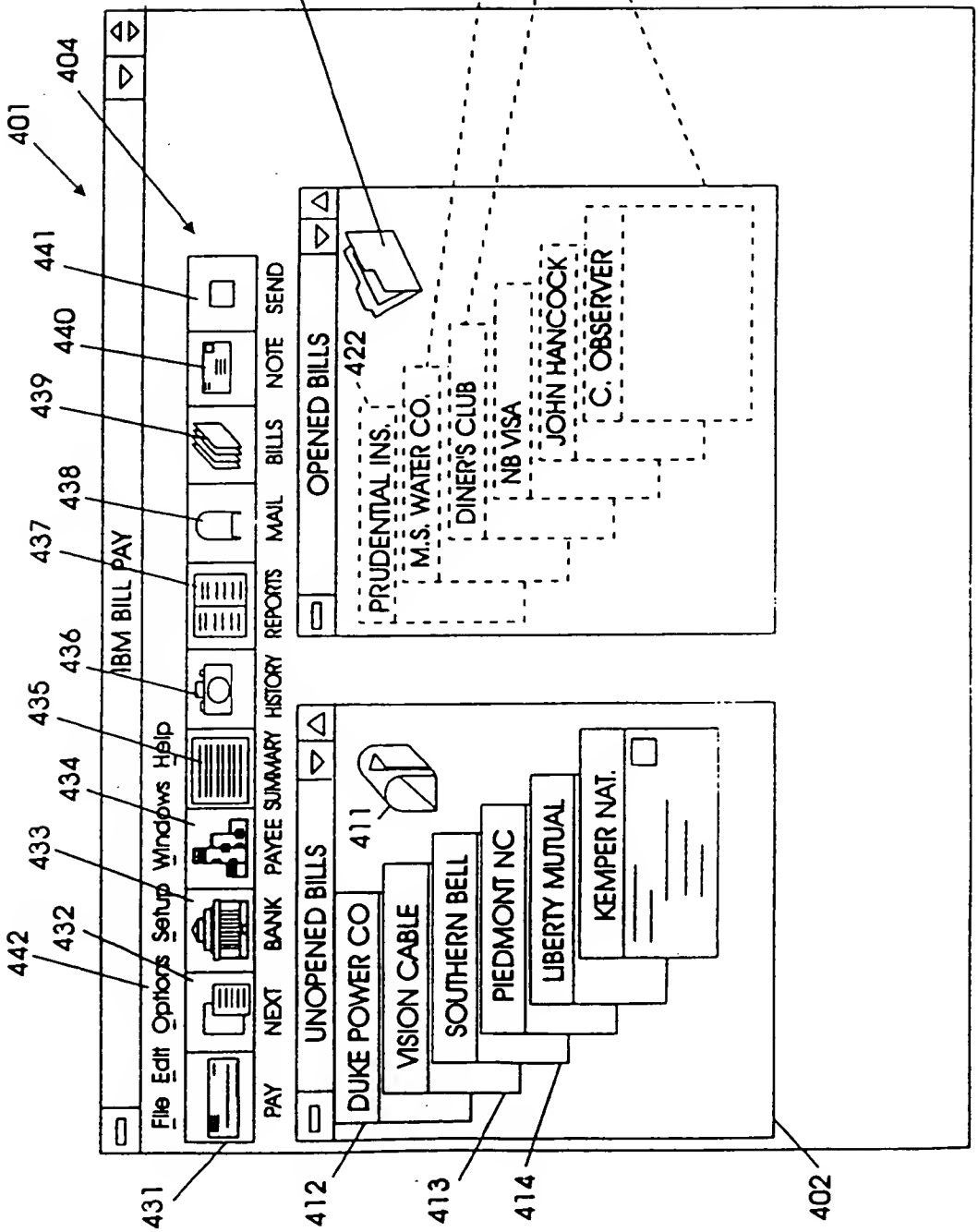
BILL ORIGINATOR'S BANK
104
BILL PAYERS CONSUMERS OR BUSINESSES
102
ELECTRONIC BILL PRESENTER
200
BILL ORIGINATOR
101
PAYMENT INSTRUCTIONS 203
202 ELECTRONIC BILL PRESENTMENT
PAYMENT 205
204
RECONCILED PAYMENT 207
201 ELECTRONIC BILL
PAYMENT NOTIFICATION 206

FIG. 2

FIG. 4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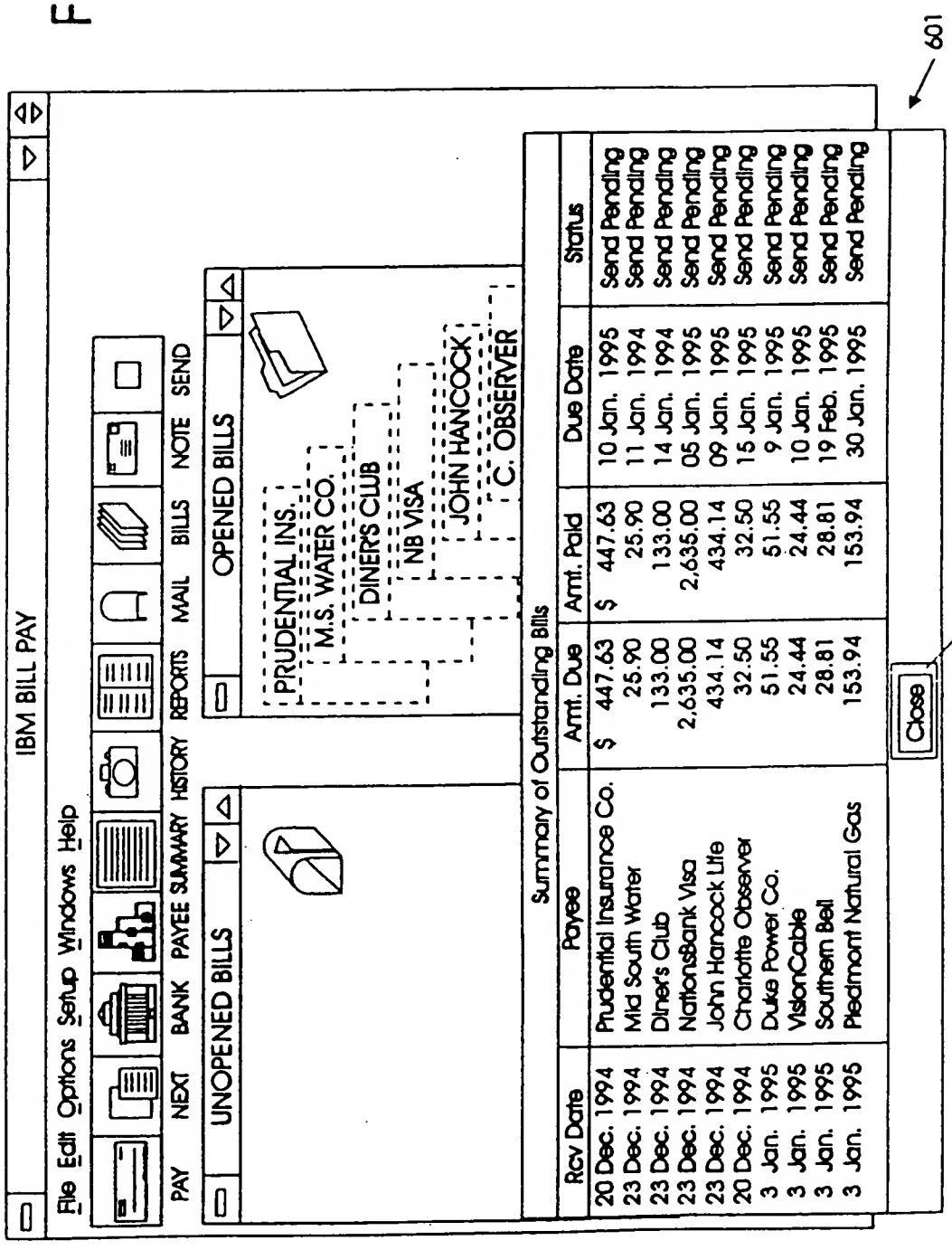
VISION CABLE
SOUTHERN BELL
PIEDMONT NC
LIBERTY MUTUAL
KEMPER NAT.
OPENED BILLS
PRUDENTIAL INS.
M.S. WATER CO.
DINER'S CLUB
NB VISA
JOHN HANCOCK
C. OBSERVER

FIG. 6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UNOPENED BILLS
OPENED BILLS
PRUDENTIAL INS.
M.S. WATER CO.
DINER'S CLUB
NB VISA
JOHN HANCOCK
C. OBSERVER
Summary of Outstanding Bills
Rcv Date | Payee | Amt. Due | Amt. Paid | Due Date | Status
20 Dec. 1994 | Prudential Insurance Co. | $ 447.63 | $ 447.63 | 10 Jan. 1995 | Send Pending
23 Dec. 1994 | Mid South Water | 25.90 | 25.90 | 11 Jan. 1994 | Send Pending
23 Dec. 1994 | Diner's Club | 133.00 | 133.00 | 14 Jan. 1994 | Send Pending
23 Dec. 1994 | NationsBank Visa | 2,635.00 | 2,635.00 | 05 Jan. 1995 | Send Pending
23 Dec. 1994 | John Hancock Life | 434.14 | 434.14 | 09 Jan. 1995 | Send Pending
20 Dec. 1994 | Charlotte Observer | 32.50 | 32.50 | 15 Jan. 1995 | Send Pending
3 Jan. 1995 | Duke Power Co. | 51.55 | 51.55 | 9 Jan. 1995 | Send Pending
3 Jan. 1995 | VisionCable | 24.44 | 24.44 | 10 Jan. 1995 | Send Pending
3 Jan. 1995 | Southern Bell | 28.81 | 28.81 | 19 Feb. 1995 | Send Pending
3 Jan. 1995 | Piedmont Natural Gas | 153.94 | 153.94 | 30 Jan. 1995 | Send Pending
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